

## **IMPLEMENTATION OF LINE GRAPH IN MAINFRAMES FOR BUSINESS ANALYSIS.**

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### **ABSTRACT**

**In the area of business management, Graphical analysis is essential in presenting crucial information and in taking appropriate remedial action. Reporting and tracking the market targets of companies is best managed by creating Graphs to visualize data and comprehend Statistics.**

**In this paper, we have provided a business solution to implement Line Graph in mainframes so that the pattern of sales of the past three years or something similar can be analyzed efficiently.**

**The technicalities involved in creating a line Graph in Mainframes includes considering all the possible variations at a point, and the same are used to depict a dynamic graph thereby making it visually effective.**

**Keywords – Dynamic, Line Graph, Mainframe, Possible Variations**

### **1.INTRODUCTION**

Mainframes are large high speed computers, which are majorly used to handle bulk data, and are primarily known for Reliability, Availability and Serviceability (RAS).The dynamism provided in Mainframes is low, but they are well known for the high level of security that they provide. Thus, incorporating some dynamic features to its user interface will make Mainframes exceedingly interactive.

As of now, to analyze the sales in Mainframes one needs to go through a large amount of data, but use of line Graph for the analysis of same data will save a lot of effort and time, and thus business can be analyzed more effectively.

The process of constructing line graph begins with the simple analysis of information available.

The various advantages of using line Graph are:

- 1) It is easy to understand.
- 2) It is best to show trends over time.
- 3) It enables the viewer to make predictions.

In our application, we have drawn a line graph that shows half-yearly sales over a period of three years. We have created a map in which the fields are defined for every possible position where there can be a peak or a drop. All these fields are initial set to dark. The data is fetched from the database and, then according to this data, the fields are brightened dynamically, thereby creating a dynamic line graph.

### **2.ALGORITHM**

Our research provides insight on developing a dynamic line graph for the sales of a company for the past three years.

The algorithm to draw a line Graph is as follows:

1. Create a X-Y plot in map and define fields for all the positions where there can be a rise or a fall.
2. The fields that represent a rise are initialized as forward slash '/' and are colored green.
3. The fields that represent a fall are initialized as backward slash '\' and are colored red.
4. When there is an intersection or the fields lie adjacently,a field of length two is defined, which is dynamically changed according to data.

Consider the following cases:

- (a) If there is a rise in sales from the previous half year this field is initialized with '/' and is brightened.
  - (b) If there is a fall in sales from the previous half year, this field is initialized with '\' and is brightened.
  - (c) If there is a rise in sales after fall in previous half year, this field is initialized with '\\/' and is brightened.
5. To represent the peak and drop, fields are set to 'X' and brightened.

### **3.FIGURES AND TABLES**

Figure 1.1 represents the map that shows all the fields defined in it (which are actually set to dark).

Figure 1.2 gives an idea of how to brighten the fields according to the data.

Figure 1.3 represents how the previous half-year sales are saved in a variable for comparison with the currently fetched data.

Figure 1.4 and Figure 1.5 shows all cases that have to be taken into consideration for brightening the fields according to the comparison of the sales for two consecutive half years.

Figure 1.6 represents the line graph according to the data fetched from the table.

Figure 1.1

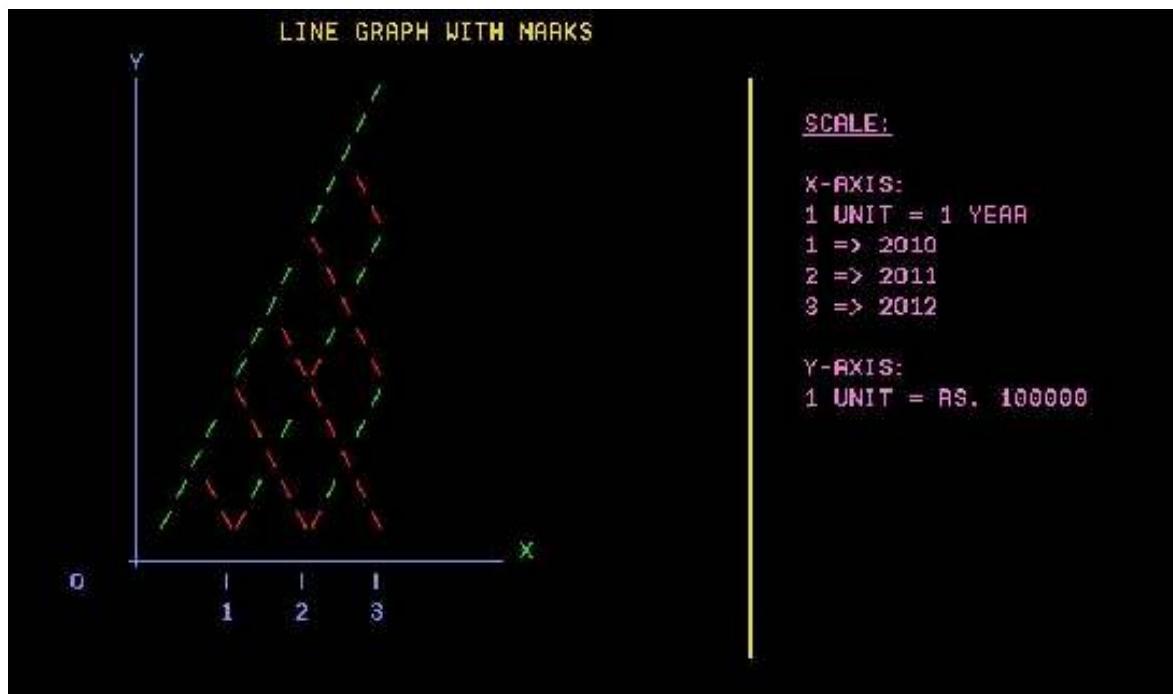


Figure 1.2

```
MOVE DFHBMBRY TO L1U11A
MOVE DFHBMBRY TO L1U12A
MOVE DFHBMPRO TO L1U11A
MOVE DFHBMPRO TO L1U12A
```

Figure 1.3

```
- EXEC SQL
    SELECT SALES INTO :R1-SALES
    FROM TRT090RESEARCH_GRAPH
    WHERE POINTS = :R1-POINTS
END-EXEC
EVALUATE R1-POINTS
```

```
END-EVALUATE
MOVE R1-SALES TO WS-PREV.
```

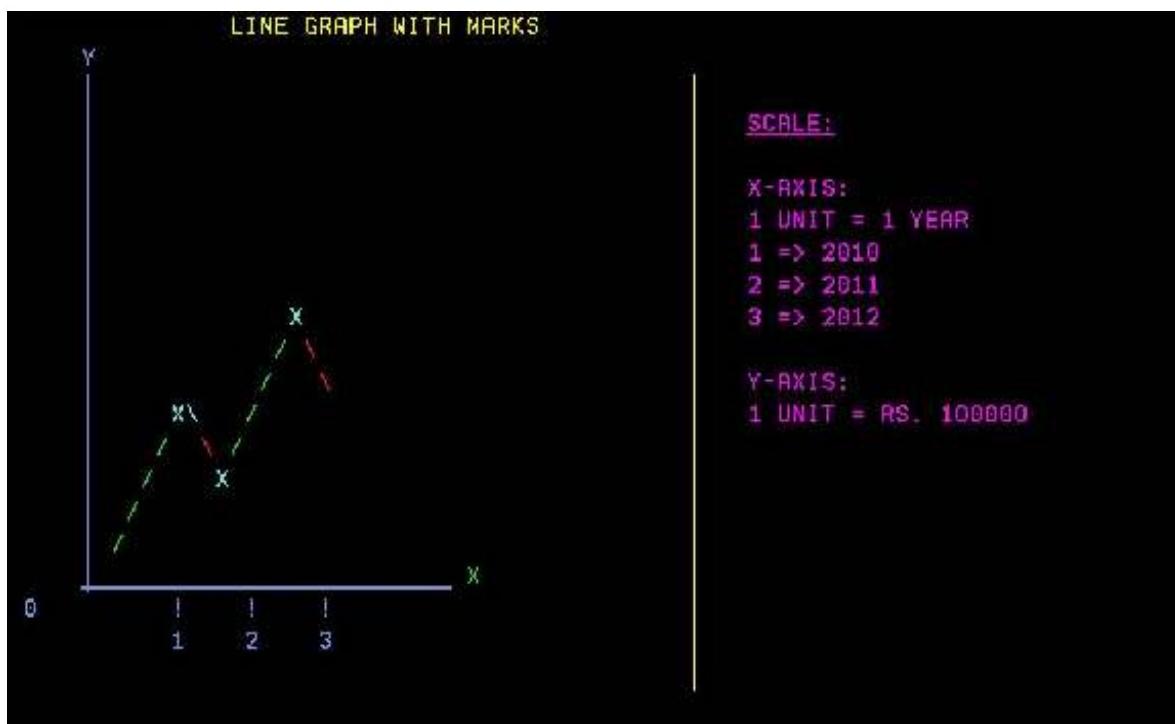
Figure 1.4

```
IF(R1-SALES=50 AND WS-PREV=40)
    MOVE DFHBMBRY TO L1U51A
    MOVE DFHBMBRY TO L1U52A
END-IF
IF(R1-SALES=30 AND WS-PREV=40)
    MOVE DFHBMBRY TO L4D52A
    MOVE 'X' TO L2U520
    MOVE DFHTURQ TO L2U52C
    MOVE DFHBMBRY TO L2U52A
    MOVE DFHBMPRO TO L4D52A
    MOVE DFHBMPRO TO L2U52A
END-IF
IF(R1-SALES=30 AND WS-PREV=20)
    MOVE ' / ' TO L2U430
    MOVE DFHBMBRY TO L2U43A
    MOVE DFHBMPRO TO L2U43A
    MOVE DFHBMBRY TO L2U51A
    MOVE DFHBMBRY TO L2U52A
    MOVE DFHBMPRO TO L2U51A
    MOVE DFHBMPRO TO L2U52A
```

Figure 1.5

```
      MOVE DFHBMPRO TO L2U52A
END-IF
IF (R1-SALES=10 AND WS-PREV=20)
  MOVE 'X\' TO L2U420
  MOVE DFHBMBRY TO L2U42A
  MOVE DFHTURQ TO L2U42C
  MOVE DFHBMPRO TO L2U42A
  MOVE DFHBMBRY TO L3D51A
  MOVE DFHBMBRY TO L3D52A
  MOVE DFHBMPRO TO L3D51A
  MOVE DFHBMPRO TO L3D52A
END-IF
IF (R1-SALES=10 AND WS-PREV=0)
  MOVE DFHBMBRY TO L3U51A
  MOVE DFHBMBRY TO L3U52A
  MOVE DFHBMPRO TO L3U51A
  MOVE DFHBMPRO TO L3U52A
END-IF
```

Figure 1.6



#### **4. CONCLUSION**

Although the same information can be inferred from studying many pages of company's batch reports, but the ease with which a single line graph can provide the same information is undeniable.

In our application, we have implemented a Line Graph that helps us to understand a company's sales so that inferring from this graph, a company can take effective measures to improve its business.

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